

### Important Instructions:

- At the end of assignment, you will be able to write code using stream, map, filter and reduce.
- Your code will be graded both on correctness and efficiency.
- Use comments in your code that explain your assumptions and design decisions.
- You need to submit your assignment solution by end of the day.
- Before submitting your assignment make sure it is as per the given requirement.
- You need to submit your assignment on mercury on the respective folder.
- Your folder name will be your employeeId\_Day\_Assignment. (E.G **105678\_Day1\_Assignment**).

### Q1 Write a java program as per the below given specification:

- i) Declare a class Employee having properties namely **name** (type String) **dept** (type String ) and **salary** (type double) declare a constructor to initialize the properties and override the **toString()** method to display Employee information .
- ii) Declare a class **StreamTest** having main() method declare an object of **ArrayList** and store four objects of **Employee** class. After storing Employee object convert the ArrayList object into Stream object and display Employee information using **forEach()** method.

### Q2. Write a java program as per the below given specification:

- i) Declare a class Employee having properties namely **name** (type String) **dept** (type String ) and salary (type double) declare a constructor to initialize the properties and generate setter and getters for all the properties.
- ii) Declare a class **StreamFilterTest** having main() method declare an object of ArrayList and store four objects of Employee class. After storing Employee object convert the ArrayList object into Stream object and perform following operations
  - a) Display total number of Employee inside each department.
  - b) Display total salary of all the Employee.
  - c) Display Employee information whose salary is greater than 20000.
  - d) Display Employee information whose salary is less than 20000.
  - e) Display information of those Employee whose name begins with A
  - f) Display Employee information which name contains more than five characters.
  - g) Display only name of the Employee after transforming name into uppercase.

**Note : Apply concept of stream and stream related operations like map and filter**

**Q3. Write a java program as per the below given specification:**

- i) Declare a List of String containing five String and then perform following operations
  - a) Return a new List of String having more than three characters
  - b) Return a String after transforming them into uppercase and join them by comma.
- ii) Declare a List of Integer containing six integers and then perform following operation
  - a) Return a new List of Integer containing the square of all distinct numbers.

**Q4 Write a java program as per the below given specification:**

- i) Declare a class Employee having properties namely **eid** (type int) **name** (type String) declare a constructor to initialize the properties and generate setter and getters for all the properties and override the **toString()** method to display Employee information .
- ii) Declare a class **StreamCollector** having main() method declare an object of ArrayList and store four objects of Employee class. After storing Employee object convert the ArrayList object into Stream object. Create a new ArrayList object containing only information of those Employee whose **eid is even** and print them .

**Note : Apply concept of stream , filter and collector**